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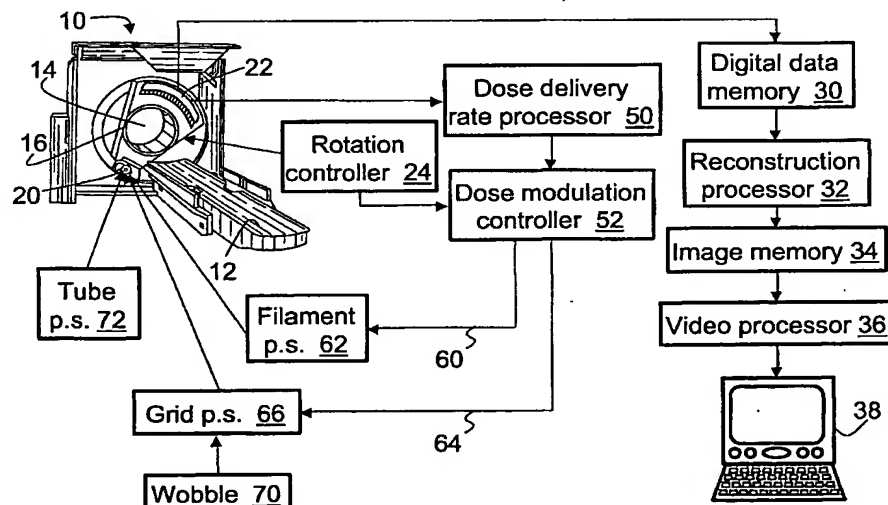
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(54) Title: HIGH SPEED MODULATION OF SWITCHED-FOCUS X-RAY TUBE



(57) Abstract: A dose-modulated irradiating system includes an x-ray tube (20) with at least a filament (80) for generating electrons, a cathode (84) and an anode (92) for accelerating and collimating the generated electrons into an electron beam (94), and an electrostatic grid with grid electrodes (110, 112) for steering the electron beam (94) on the anode (92). The anode (92) generates an x-ray beam (96) responsive to the electron beam (94). Grid biasing is provided for applying a time-varying electrical bias to the grid electrodes (110, 112) that produces a first time-varying intensity modulation of the electron beam (94). A current of the filament (80) is modulated to produce a second time-varying intensity modulation of the electron beam (94). A controller (52) controls cooperatively combining the first and second time-varying intensity modulations to produce a combined time-varying intensity modulation.